

WHAT IS CLAIMED IS:

1. A method comprising:
 - storing a telephony signal data frame in a buffer;
 - detecting a characteristic of a subsequent telephony signal data frame; and
 - 5 determining whether to analyze the stored telephony signal data frame based at least in part on a result of the detecting of the characteristic of the subsequent telephony signal data frame.
2. The method of claim 1, wherein the detecting of the characteristic of the subsequent telephony signal data frame includes detecting whether a signaling tone is present in the
10 subsequent telephony signal data frame.
3. The method of claim 2, further comprising:
 - if the signaling tone is detected in the subsequent telephony signal data frame, analyzing the stored telephony signal data frame to detect whether the signaling tone is present in the stored telephony signal data frame.
- 15 4. The method of claim 3, wherein the analyzing of the stored telephony signal data frame includes performing a fast Fourier transform with respect to the stored telephony signal data frame.
5. The method of claim 2, wherein the detecting of the characteristic of the subsequent telephony signal data frame includes performing a fast Fourier transform with respect to
20 the subsequent telephony signal data frame.

6. A method comprising:

receiving a sequence of telephony signal data frames;

analyzing some but not all of the received telephony signal data frames to
determine whether a signaling tone is present in the some of the received telephony signal
5 data frames.

7. The method of claim 6, wherein the analyzing of the some of the received telephony
signal data frames includes performing a fast Fourier transform with respect to each of
the some of the received telephony signal data frames.

8. The method of claim 6, wherein the analyzing of the some of the received telephony
10 signal data frames includes performing a filter bank analysis with respect to each of the
some of the received telephony signal data frames.

9. A method comprising:

selecting frames from a sequence of frames of telephony signal data;

analyzing the selected frames to determine whether a signaling tone is present in
15 the selected frames; and

if it is determined that a one of the analyzed frames includes a beginning or an
end of a signaling tone, analyzing subframes of the one of the analyzed frames to
determine whether the signaling tone is present in the subframes of the one of the
analyzed frames, the subframes each overlapping a portion of the one of the analyzed
20 frames.

10. The method of claim 9, wherein the selecting includes selecting every nth frame
from the sequence of frames of telephony signal data, n being an integer greater than 1.

11. The method of claim 10, wherein the selecting further includes selecting each frame that is immediately before or immediately after an analyzed frame that is determined to include a signaling tone.

12. The method of claim 9, wherein the analyzing of the selected frames includes
5 performing a fast Fourier transform with respect to the selected frames.

13. An apparatus comprising:

a buffer to store a telephony signal data frame; and

circuitry coupled to the buffer and operative to:

detect a characteristic of a subsequent telephony signal data frame; and

10 determine whether to analyze the telephony signal data frame stored in the buffer based at least in part on a result of detecting the characteristic of the subsequent telephony signal data frame.

14. The apparatus of claim 13, wherein the circuitry is operative to detect whether a signaling tone is present in the subsequent telephony signal data frame.

15 15. The apparatus of claim 14, wherein the circuitry is operative, if the circuitry detects that the signaling tone is present in the subsequent telephony signal data frame, to detect whether the signaling tone is present in the telephony signal data frame stored in the buffer.

16. The apparatus of claim 14, wherein the circuitry is operative to perform a fast Fourier transform with respect to the subsequent telephony signal data frame.

17. An apparatus comprising:

5 a buffer to store telephony signal data frames from a sequence of telephony signal data frames; and

circuitry coupled to the buffer and operative to analyze some but not all of the telephony signal data frames stored in the buffer to determine whether a signaling tone is present in the some of the stored telephony signal data frames.

10 18. The apparatus of claim 17, wherein the circuitry is operative to perform a fast Fourier transform with respect to each of the some of the stored telephony signal data frames.

19. The apparatus of claim 17, wherein the circuitry is operative to perform a filter bank analysis with respect to each of the some of the stored telephony signal data frames.

20. An apparatus comprising:

15 frame selection circuitry to select frames from a sequence of frames of telephony signal data;

frame analysis circuitry, responsive to the frame selection circuitry, and operative to analyze the frames selected by the frame selection circuitry to determine whether a signaling tone is present in the frames selected by the frame selection circuitry; and

20 subframe analysis circuitry, responsive to the frame analysis circuitry, and operative to analyze subframes of frames determined by the frame analysis circuitry to include a beginning or an end of the signaling tone, to determine whether the signaling

tone is present in the subframes, the subframes each overlapping a portion of a respective one of the frames.

21. The apparatus of claim 20, wherein the frame selection circuitry is operative to select every nth frame from the sequence of frames of telephony signal data, n being an integer
5 greater than 1.

22. The apparatus of claim 21, wherein the frame selection circuitry is responsive to the frame analysis circuitry to select each frame that is immediately before or immediately after a frame that is determined by the frame analysis circuitry to include a signaling tone.

23. The apparatus of claim 20, wherein the frame analysis circuitry is operative to
10 perform a fast Fourier transform with respect to the frames selected by the frame selection circuitry.

24. A system comprising:
an interface to receive an input signal;
a buffer coupled to the interface to store a telephony signal data frame included in
15 the input signal; and
circuitry coupled to the buffer and operative to:
detect a characteristic of a subsequent telephony signal data frame; and
determine whether to analyze the telephony signal data frame stored in the
buffer based at least in part on a result of detecting the characteristic of the subsequent
20 telephony signal data frame.

25. The system of claim 24, wherein the circuitry is operative to detect whether a signaling tone is present in the subsequent telephony signal data frame.

26. The system of claim 25, wherein the circuitry is operative, if the circuitry detects that the signaling tone is present in the subsequent telephony signal data frame, to detect
5 whether the signaling tone is present in the telephony signal data frame stored in the buffer.

27. The system of claim 25, wherein the circuitry is operative to perform a fast Fourier transform with respect to the subsequent telephony signal data frame.

28. An apparatus comprising:

10 a storage medium having stored therein instructions that when executed by a machine result in the following:

storing a telephony signal data frame in a buffer;

detecting a characteristic of a subsequent telephony signal data frame; and

determining whether to analyze the stored telephony signal data frame based at
15 least in part on a result of the detecting of the characteristic of the subsequent telephony signal data frame.

29. The apparatus of claim 28, wherein the detecting of the characteristic of the subsequent telephony signal data frame includes detecting whether a signaling tone is present in the subsequent telephony signal data frame.

20 30. The apparatus of claim 29, wherein the instructions further result in:

if the signaling tone is detected in the subsequent telephony signal data frame, analyzing the stored telephony signal data frame to detect whether the signaling tone is present in the stored telephony signal data frame.

31. The apparatus of claim 30, wherein the analyzing of the stored telephony signal data
5 frame includes performing a fast Fourier transform with respect to the stored telephony signal data frame.

32. The apparatus of claim 29, wherein the detecting of the characteristic of the subsequent telephony signal data frame includes performing a fast Fourier transform with respect to the subsequent telephony signal data frame.